

Emerging Commercial UAS Operating Environments (OE)

IFR-LIKE

UAS will be expected to meet certification standards and operate safely with traditional air traffic and ATM services. (Example Use Case: Communication Relay / Cargo Transport)

FL-600

18K'
MSL

Non-cooperative
Traffic

Cooperative
Traffic

Cooperative
Traffic

10K'
MSL

VFR-LIKE

These UAS will operate at altitudes below critical NAS infrastructure and will need to routinely integrate with both cooperative and non-cooperative aircraft. (Example Use Case: Infrastructure Surveillance)

Non-Cooperative
Traffic

Cooperative
Traffic

Top of
Class G

BVLOS RURAL

Low risk BVLOS rural operations with or without aviation services. (Example Use Case: Agriculture)

Non-Cooperative
Aircraft

BVLOS URBAN

Must interface with dense controlled air traffic environments as well as operate safely amongst the traffic in uncontrolled airspace. (Example Use Case: Traffic Monitoring / Package Delivery)

Terminal
Airspace

Airport

Agricultural
Aircraft

Helicopters

VLOS

VLOS

URBAN

Restricted Access

TIME (Notional)

Routine Access



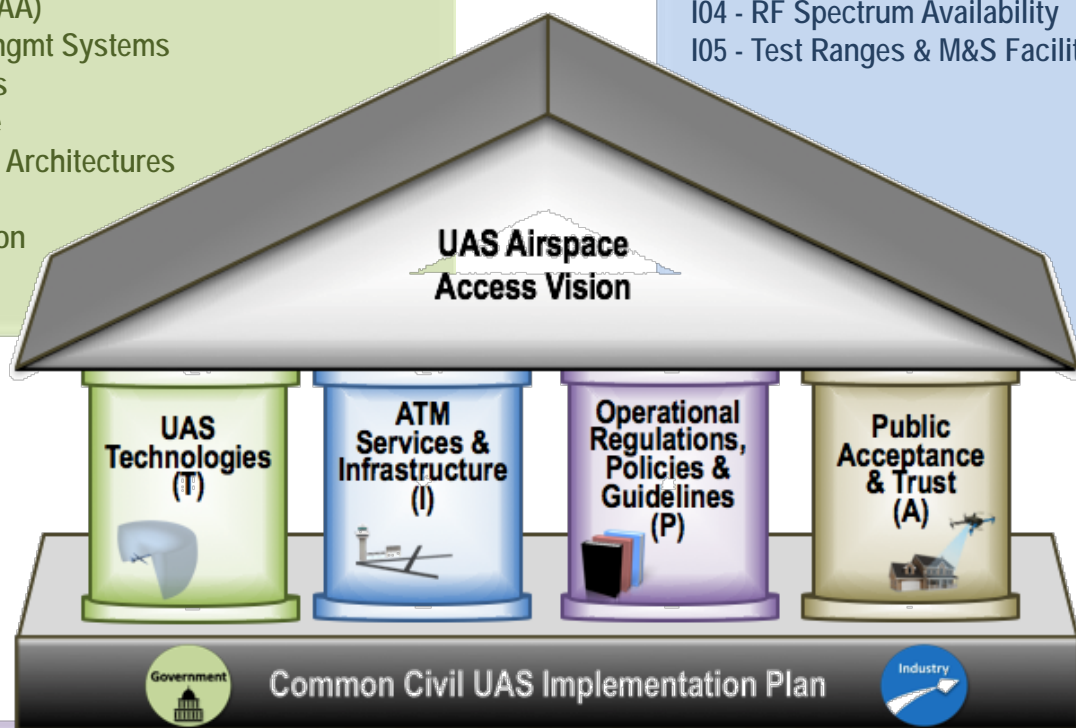
UAS Airspace Access Enablers

UAS Technologies:

- T01 - Airport Operations Technologies
- T02 - Airworthiness Standards
- T03 - Command, Control, Communications (C3)
- T04 - Detect & Avoid (DAA)
- T05 - Flight & Health Mngmt Systems
- T06 - GCS Technologies
- T07 - Hazard Avoidance
- T08 - Highly Automated Architectures
- T09 - Navigation
- T10 - Power & Propulsion
- T11 - Weather

ATM Services & Infrastructure:

- I01 - Airport Infrastructure
- I02 - ATM Infrastructure
- I03 - Non-FAA Managed Airspace Infrastructure
- I04 - RF Spectrum Availability
- I05 - Test Ranges & M&S Facilities



Operational Regulations, Policies & Guidelines:

- P01 - ATM Regulations / Policies / Procedures
- P02 - Airworthiness Regulations / Policies / Guidelines
- P03 - Operating Rules / Regulations / Procedures
- P04 - Safety Risk Mngmt & Methods of Compliance

Public Acceptance & Trust:

- A01 - Cybersecurity Criteria & Methods of Compliance
- A02 - Legal & Privacy Rules / Guidelines
- A03 - Noise Reductions
- A04 - Physical Security Criteria & Methods of Compliance
- A05 - Public Safety Confidence